

# Facebook for the Enterprise

The oil and gas industry adapts social media networking as a tool suitable for global corporations.

By Chris Van Dyke and Craig Hodges, *Microsoft*

**T**hey say a wise person learns from the experiences of others. The idea is a valid one in business, leading to savings in both time and resources. Within oil and gas corporations, though, a scalable and widely accepted system of communication is needed for knowledge sharing to work. Roles-based information portals can preserve, while giving broad access to a wide base of asset team members, important institutional knowledge.

Like others in the industry, three generations of ConocoPhillips employees every day work side-by-side, yet dispersed around the world, and a significant number of the experienced workers are preparing to retire soon. That, plus regular attrition, creates the need for effective knowledge sharing.

"With our Intranet-based discussion forums, state-of-the-art browse-and-search tools, and content management processes, our portal structure goes a long way in addressing the looming generational gap and maintaining our intellectual capital. This is a key part of our strategy to retain critical knowledge," said Dan Ranta, director of upstream knowledge sharing at ConocoPhillips.

Due to its global nature, oil and gas industry workers must additionally work with internal and external contacts located halfway around the world. They may never actually meet face to face.

"Portal sites make it possible for a diverse, global work force to connect with each other easily, aided by a business-focused network structure that encourages people to form trusted relationships regardless of their location," Ranta adds.

Think of the information portal as a central meeting place for employees to share ideas and raise questions for community attention. From a single location, teams and individuals within the organization coordinate schedules, organize documents, and participate in discussions. Information portals are a forum for connecting expertise to problems. Quick access to critical information and expertise means better decisions and more rigorous execution.

Through integration of business intelligence tools, portals serve as a common interface into line-of-business applications. Users view near-real-time information as key performance indicators (KPI) that may include revenue and profit per barrel, lifting costs, and other business-health indicators.

Additionally, portals aligned with a role-based function allow a variety of workers to view selected information pertinent to their job title or responsibility. For example, a petroleum engineer might only want to see the production charts and subsurface logs for a particular well, while a facilities engineer will need to locate the well's maintenance history and

**Table 1. Four of 10 oil and gas industry professionals view new social media tools as useful to boost collaboration and productivity on the job. (Data courtesy of Microsoft)**

| Function                  | Useful | Not Very Useful | Not Useful At All |
|---------------------------|--------|-----------------|-------------------|
| Social Networking Site    | 57.7%  | 25.0%           | 17.3%             |
| Video or Photo Sharing    | 56.0%  | 24.0%           | 20.0%             |
| Blogging or Mini-blogging | 43.9%  | 34.0%           | 22.1%             |
| Wikis                     | 43.2%  | 34.2%           | 22.6%             |
| Podcasts                  | 38.1%  | 48.4%           | 34.6%             |

work orders. This technology gives managers, engineers, and operations personnel a quick look into potential problem areas in a highly capable 24/7 collaborative environment.

Several oil and gas companies are using portals to help users understand the larger picture of what's going on in the organization, enabling them to share best practices, detect problems, and locate the necessary information to take corrective actions.

ConocoPhillips' network-based portal sites enable people to find better solutions quickly. Take the example of how an employee in Indonesia posted a question to the network's online portal inquiring whether it was safe to extend the run time of a power turbine beyond its scheduled maintenance overhaul. The timing of the overhaul would have resulted in a significant impact to production while the turbine and the gas compressor it drove were temporarily shut down.

Expert engineers in Alaska, Australia, and the corporate engineering group all responded, indicating it was both safe and permissible to continue running the equipment as long as the power it produced was acceptable and vibration levels were below alarm limits. By temporarily extending the turbine's run time and deferring the overhaul to a more opportune time, the Indonesian unit avoided millions of dollars in additional lost production without compromising safety.

## Today's next-gen portal

In many instances, traditional portals are only information repositories and search tools for locating buried data. The next-generation portal is more dynamic and fluid, enabling real-time idea and problem-solving collaboration. Social media tools like blogs, wikis, and networking sites can be leveraged for business purposes and integrated into the portal so that a diverse and widespread set of users have direct and timely connection with one another and the organization.

Practical uses of these social media tools within portals are

numerous and may include the following:

- Blogs provide a place for engineers to capture communications with others while troubleshooting a problem, thus creating a best-practices scenario;
- Wikis with a business-domain focus such as “drilling,” “production,” or “facilities” provide senior engineers easy methods for documenting how they do their jobs;
- Instant messaging provides a real-time awareness of presence within the business. Online presence allows users to see when peers are available to interact with one other; and
- Micro-blogging methods similar to the 140-character messages on Twitter can extend past the user to other entities within the business, such as the fields, wells, and equipment — especially when combined with business intelligence data. Users see those events happening in the field that require attention specific to their role.

Oil and gas industry professionals are quickly realizing Facebook and Twitter are not just for millennials or the consumer market. Respondents to a recent Microsoft and Accenture survey of oil and gas professionals indicated social media tools can play a vital role in enhancing collaboration within critical oilfield initiatives, including project management, sourcing scarce resources, and sharing health and safety advisories. Professionals also believe social-media technologies help stem the flow of intellectual knowledge from workers quickly hitting retirement age.

## A collaborative environment

The portal of tomorrow also acts as a hub for daily work activities. A petroleum engineer, for example, may start his or her day by opening a personal site on the portal. This page is similar in look and feel to a Facebook profile, allowing the engineer to post relevant information such as personal details, documents, contacts, and knowledge areas. The user can also subscribe to news feeds containing events and alerts associated with entities they manage such as wells, fields, or equipment.

In one scenario, the engineer notices an alert in her news feed shows field production is below forecast for the past few days. The alert links the engineer to an internal profile of the field on the portal page that shows the field’s scorecard and a newsfeed discussing relevant events and alerts. Here the engineer sees several other entries showing multiple wells in the field are below forecast. Because these alerts are related to a greater field-wide production issue, the engineer focuses on each individual well-level alert on a given well’s portal page. Page content includes production history, real-time data, work order history, logs, and well tests. Reviewing this information, the engineer sees that the problem is not at the well level.

At this point, the engineer requires further insight from someone else on her team. She starts a conversation with a senior engineer who she notices is available through the portal’s instant messenger service. The senior engineer suggests the problem could be with the separator in this portion of the field and recommends doing an inspection of the separator. The

engineer creates a work order and notes the corrective action in the comments section of the alert that started the investigation originally. By logging these actions, engineers who later work on this field can more quickly locate solutions to other problems that might arise based on past work history.

## Business case for the portal

As the oil and gas industry becomes increasingly savvy in using portals, new communities of internal and external users will begin sharing insights across a broad range of difficult industry challenges — from health, safety, and environmental concerns to avoiding revenue loss.

“The business impact of collaboration has made Conoco-Phillips’ people and operations safer, lessened environmental impacts, and helped our operations reduce or avoid lost production,” Ranta said. “Our operations have become more efficient, as in the case of our North Sea Business Unit that created and implemented a new Production Optimization Center. Along with reducing production losses, the POC has improved production coordination, planning, and communication.”

Perhaps the true value in portals lies in the ability to bridge valuable information from knowledge-holders to the professionals who need it the most — all in real time. ■



In the example, detailed pages for each well maintain up-to-the-minute well-production statistics; a satellite image highlighting required attention areas; and other key performance indicators. The user can also communicate through instant messaging with other team members regarding problem areas.

**Microsoft**

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